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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,825	04/02/2001	Benoit Barriere	ATOCM-207	8093
23599	7590	01/27/2004	EXAMINER	
MILLEN, WHITE, ZELANO & BRANIGAN, P.C. 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VA 22201			CREPEAU, JONATHAN	
			ART UNIT	PAPER NUMBER
			1746	

DATE MAILED: 01/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/822,825

Applicant(s)

BARRIERE ET AL.

Examiner

Jonathan S. Crepeau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 6-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 6-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This Office action addresses claims 1 and 6-12. Although claim 1 has been amended, the claims remain rejected for the reasons of record. Accordingly, this action is made final.

Claim Rejections - 35 USC § 103

2. Claims 1 and 6-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 97/27260 in view of Takahashi et al (U.S. Patent 5,415,958) as evidenced by Mizuide et al (U.S. Patent 6,329,471).

Regarding claims 11 and 12, WO '260 discloses a lithium battery comprising a positive electrode and negative electrode (see page 6, lines 1-5). Regarding claims 6 and 7, the positive electrode comprises mixed oxide particles (see page 6, line 32). Regarding claims 6 and 9, the negative electrode comprises carbon particles (see page 6, line 9). Regarding claim 8, the current collector of the positive electrode is aluminum (see page 10, line 34). Regarding claim 10, the current collector of the negative electrode is copper (see page 10, line 26). Regarding claims 6 and 13, each electrode comprises a structure having a collector (L1) and a fluorinated adhesive composition (L2) comprising the active material (see page 7, lines 6-27). However, regarding claims 1 and 6, the invention of WO '260 is more broadly directed to structures comprising a

metal (L1), a fluorinated adhesive composition (L2), and a fluorinated resin (L3), in that order (see page 4, lines 18-20).

WO '260 does not expressly teach that the layer L2 comprises a layer of fluoro primer which is derived from a fluoropolymer (e.g., VDF-HFP) chemically modified by a partial dehydrofluorination followed by oxidation as recited in claim 1.

Takahashi et al. is directed to carboxyl group-containing vinylidene fluoride copolymer binder composition for a lithium secondary battery (see abstract). The copolymer may contain vinylidene fluoride and hexafluoropropylene (see col. 3, lines 40-57).

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated to use the carboxyl group-containing vinylidene fluoride copolymer binder composition of Takahashi et al. as the layer L2 of WO '260. In column 7, line 64, Takahashi et al. teach that "[b]ecause of the excellent adhesion to a substrate of metals, plastics, glass, ceramics, wood, etc., and chemical resistance, the vinylidene fluoride copolymer according to the present invention can be extremely suitably used for various paints, lining materials and binders. It is particularly useful to use the copolymer as a binder for cell electrode production." Thus, the artisan would be motivated to use the carboxyl group-containing vinylidene fluoride copolymer binder composition of Takahashi et al. as the layer L2 of WO '260. The hexafluoropropylene monomer comprises a perfluoroalkyl (CF₃) group, as recited in claim 4.

Although Takahashi et al. do not teach that the binder composition is formed by partial dehydrofluorination followed by oxidation, the structure of the polymer of Takahashi et al.

appears to be identical to that of a polymer made by the claimed process. See U.S. Patent 6,329,471 to Mizuide et al., which discloses a carboxyl-group containing fluorine-based copolymer made by the claimed process. Accordingly, as the polymer of Takahashi et al. and claimed polymer appear to be identical, the burden is shifted to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). See also MPEP §2113.

Further, although WO '260 does not expressly teach the feature in claim 6 that the layer L3 of fluoropolymer contains the active material, this feature would be obvious to one of ordinary skill in the art. As noted above, the reference specifically teaches layers L1 and L2 in an electrode (L2 containing the active material), but more broadly teaches a structure comprising layers L1, L2, and L3 (L3 being a conventional fluoropolymer). The artisan would be motivated to use an electrode structure comprising three layers instead of two because the unmodified fluoropolymer in layer L3 is more resistant to chemical attack than the modified polymer (see col. 6, line 14 of WO '260; col. 7, lines 58-63 of Takahashi). Accordingly, the WO '260 reference fairly suggests the three-layer electrode structure recited in claim 6.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed.

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Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of copending Application No. 10/088,560 (U.S. Pre-Grant Publication No. 2003/0087100). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the '560 application anticipate instant claim 1. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

5. Applicant's arguments filed December 23, 2003 have been fully considered but they are not persuasive. Applicants assert that "[a]lthough, the Office Action then speculates that such treatment [partial dehydrofluorination followed by oxidation] produces carboxyl group-containing fluorine-based copolymers, and then further speculates that the polymer of Takahashi

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and that claimed would be identical, absolutely no scientific basis for these assumptions is given." In response, it is asserted that it is not mere speculation by the Examiner that the partial dehydrofluorination/oxidation treatment of a fluoropolymer results in a carboxyl group-containing polymer, because Mizuide expressly discloses such in the abstract. Thus, reasonable scientific basis is present for the Examiner's position that the carboxyl group-containing fluorine-based copolymers of Takahashi are structurally indistinguishable from Applicant's claimed polymer. Applicant is reminded that in situations where the claimed product and prior art product appear to be structurally indistinguishable, the burden is shifted to Applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). See also MPEP §2113.

Applicants further assert that "a material not treated as disclosed in the present specification would not possess adhesion characteristics." However, Takahashi et al. expressly disclose in the abstract that their material has "large adhesion to various substrates." Accordingly, this assertion is also not persuasive in distinguishing the claims over the references.

Conclusion

6. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

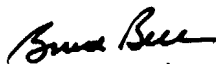
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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached at (571) 272-1302. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (703) 872-9306.

Jonathan Crepeau
Patent Examiner
Art Unit 1746
January 15, 2004


BRUCE F. BELL
PRIMARY EXAMINER
GROUP 1746